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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
FLORENCE L'ALLORET : EXAMINER: FUBARA, B.  
SERIAL NO: 10/070,911 :  
FILED: MARCH 13, 2002 : GROUP ART UNIT: 1618  
FOR: COMPOSITION WITH AN :  
OPTICAL EFFECT, ESPECIALLY  
COSMETIC COMPOSITIONS

APPEAL BRIEF

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

This brief is submitted in response to the rejection dated October 13, 2006.

REAL PARTY OF INTEREST

The real party of interest herein is L'Oréal of Paris, France.

RELATED APPEALS AND INTERFERENCES

To the best of Appellants' knowledge, there are no other appeals or interferences which will directly affect or be directly affected by, or have a bearing on, the Board's decision in this appeal.

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STATUS OF CLAIMS

Claims 34-69 are active in this application.

**STATUS OF AMENDMENTS**

No outstanding amendments are present in this case.

**SUMMARY OF CLAIMED SUBJECT MATTER**

The claimed invention as set forth in Claim 34 (Appendix I) is directed to a cosmetic composition *[page 1:lines 11-15]* comprising an aqueous phase *[page 2, lines 29-30]*, said aqueous phase comprising

(1) at least one compound with an optical effect *[page 1, lines 19-25; page 2, lines 31-34]* and

(2) a polymer *[page 6, lines 1-5]* comprising

(i) water-soluble units *[page 6, line 3]* and

(ii) units having in water a lower critical solution temperature LCST *[page 6, lines 3-5]*,

(a) the heat-induced demixing temperature in aqueous solution of said units with an LCST being from 5 to 40°C for a concentration by mass in water of from 1% to 25% of said units *[page 6, lines 30-34]*,

(iii) wherein the polymer is a block polymer comprising

(a) blocks consisting of water-soluble units alternating with units with an LCST *[page 13, lines 3-6]*; or

(b) the polymer is a graft polymer whose backbone is formed from water-soluble units and bears LCST grafts *[page 3, lines 8-10]*.

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The rejection to be reviewed on appeal is whether Claims 34-69 are properly rejected under 35 U.S.C. 102(b) in view of U.S. 5,730,966 ("Torgerson").

While there is a provisional rejection under the doctrine of obviousness-type double patenting in view of copending application no. 10/197,560, as the rejection is only provisional, review is not requested at this time.

### ARGUMENT

It is well-settled law that the standard set forth in § 102(b) is that of novelty. Lack of novelty, i.e., anticipation requires strict identity between the claimed invention and that disclosed in the prior art reference. To anticipate a claim, a single prior art source must contain all of the essential limitations of the claim *Verdegaal Bros. v. Union Oil Co. of California* 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Put very simply, the claimed invention is not described by Torgerson with sufficient specificity as to constitute anticipation under U.S. patent law and therefore the rejection under 35 U.S.C. § 102(b) should be REVERSED.

As set forth in the specification on page 2, lines 19-26, the aim of the present invention is to satisfy: :

The need for a composition with an optical effect, which gives, after application deposits or films with excellent staying power even under humid and/or hot atmospheric conditions. The said composition that can provide a wide range of textures, in particular at room temperature, allows an easy application.

Torgerson simply does not and cannot anticipate the claimed invention. In particular, the claims require water-soluble units and N-vinylcaprolactam homopolymers or copolymers as LCST units in a proportion by weight from 5 to 70% AND

the polymer is

(a) a block polymer comprising water-soluble blocks alternating with LCST blocks;

OR

(b) a graft polymer whose backbone is formed from water-soluble units and bears LCST grafts.

While Torgerson describes any number of possible polymers, Torgerson does not describe with sufficient specificity the polymers as claimed.

The Examiner's rationale that one could have picked from any number of monomers in Torgerson is not tenable. The Examiner has failed to recognize that Torgerson does not describe a block polymer as claimed nor provides any direction to the graft polymer which is also an option as claimed. Therefore, on this basis, the rationale for maintaining the rejection was not proper.

Furthermore, as set forth in the Patent Office Manual of Patent Examining Procedure (MPEP) section 2131.02:

When the compound is not specifically named, but instead it is necessary to select portions of teachings within a reference and combine them, e.g., select various substituents from a list of alternatives given for placement at specific sites on a generic chemical formula to arrive at a specific composition, anticipation can only be found if the classes of substituents are sufficiently limited or well delineated

Here, Torgerson simply does not describe, with sufficient specificity, the selection of monomers of a polymer in a cosmetic composition where the polymer is (a) a block polymer comprising water-soluble blocks alternating with LCST blocks; OR (b) a graft polymer whose backbone is formed from water-soluble units and bears LCST grafts.

Torgerson describes water or alcohol dispersible elastomeric copolymers useful in cosmetic applications. The copolymers of Torgerson contain randomly polymerized monomers which provide repeating units A and B (col. 3, of Torgerson). Furthermore, Torgerson generically describes each monomer and the combinations that would result from selecting any particular monomer from each group is enormous (see cols. 2-3 and 8-9). There is simply no direction in Torgerson to select polymers that control "rheology of aqueous compositions as a function of temperature, while at the same time maintaining a certain level of transparency for the composition" as set forth in the present specification on page 4, lines 17-22.

Rather, Torgerson is concerned with selecting monomers based on different polymer properties, i.e., flexibility, elasticity, solubility, glass transition temperatures ( $T_g$ ), molecular weights, and strength, which are properties useful for hair styling compositions (see col. 1, line 64 to col. 2, line 3; and col. 4, lines 54-55).

More specifically, Torgerson is concerned with preparing and utilizing graft copolymers:

The present invention relates to a water or alcohol soluble or dispersible thermoplastic elastomeric copolymer having a **backbone and** two or more polymeric **pendant side chains** . . . (col. 2, lines 37-39, emphasis added).

The copolymers of the present invention, can also be referred to as "**graft copolymers**" because they can be prepared from the copolymerization of monomer units and macromonomer units. *In other words, the macromonomer is "grafted" or incorporated into the copolymer.* (col. 4, lines 59-63, emphasis added).

Further, Torgerson describes the graft copolymers as:

characterized in having an elastomeric or flexible backbone and rigid, thermoplastic, hydrophilic side chains. (col. 4, lines 55-56)

As purported basis for maintaining this rejection, the Examiner states:

"The Torgerson reference discloses graft copolymers where the A units as described above are the water-soluble polymers and the B units meet the limitation of LCST." (page 6, 1<sup>st</sup> paragraph of the final Official Action mailed October 13, 2006).

The Examiner's conclusions are misplaced. Notably, as is discussed above, when Torgerson describes a graft copolymer, it has an elastomeric, flexible backbone and rigid, thermoplastic, hydrophilic side chains (col. 2, lines 37-56; lines 47 and 48; col. 3, lines 17, 33, and 34; col. 4, lines 54-56 and lines 65-67, and col. 5, lines 52-54). Thus, Torgersons B monomers, which are the grafts or side chains, are hydrophilic in the entire reference (the

ethylenically unsaturated moiety E copolymerizable with A is NOT hydrophilic but B as a whole is hydrophilic and in the final copolymer E is part of the backbone). See col. 3, line 17; col. 9, line 1; col. 10, lines 13-17).

There is no disclosure where the A units form water-soluble polymers as alleged by the Examiner. While some of the A monomers in Torgerson may be water-soluble, the backbone itself, which is a polymer of the A monomers and E moieties (part of the B monomers) as a whole are NOT water-soluble.

One reading the Torgerson disclosure comes away with the necessary teaching to prepare polymers with an elastomeric or flexible backbone and a rigid, thermoplastic, hydrophilic side chains (col. 4, lines 54-56) and are unlike those in the claims which have a water-soluble backbone. Thus, Torgerson's disclosure would teach away from the types of polymers defined in the claims particularly as Torgerson teaches the art to select the A monomers which are not water-soluble (see **MPEP § 2141.02** (prior art must be considered in its entirety, including disclosures that teach away from the claims). Moreover, going against the explicit requirements of Torgerson's disclosure would effectively render its disclosure meaningless (see **MPEP § 2143.01** (proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference)).

The first option in Claim 34, which is defined as a block copolymer with alternating units of water-soluble and LCST blocks, is clearly different than the grafted polymers described by Torgerson. Therefore, even if one could simply pick and choose the appropriate monomers, the monomers would not be arranged as in the present claims following the description in Torgerson.

In response, the Examiner states, in part, "Torgerson meets claim 34 by disclosing a graft polymer" again picking through the Torgerson disclosure for A monomers and B

monomers (see page 7 of the Final Official Action mailed October 13, 2006). The point is missed. That is, one reading the entirety of the Torgerson disclosure (as is required), would lead one towards non water-soluble units in the backbone (the A units) because as discussed above, and repeated again: IN TORGERSON'S GRAFTS, THE SIDE CHAINS ARE WATER-SOLUBLE NOT THE BACKBONE UNITS.

Concerning the second option in Claim 34, which is defined as a water-soluble backbone with LCST grafts, this polymer is certainly not described in Torgerson because at col. 5, line 48-62 Torgerson describes:

*The copolymers of the present invention are formed from the copolymerization of randomly repeating A and B units . . . In typical embodiments of these copolymers, **the backbone is primarily derived from the ethylenically unsaturated portion of the A monomer unit and the ethylenically unsaturated portion of the B macromonomer unit. The side chains are derived from the non-copolymerized portions of the macromonomer.***

Where is there a description for a water-soluble backbone with LCST grafts?  
Certainly not here.

Further, Torgerson describes that the water-soluble monomers that impart the polymer with water-solubility, see again col. 4, lines 55-56 of Torgerson: "an elastomeric or flexible backbone and rigid, thermoplastic, hydrophilic side chains."

In view of the above reasons alone, the rejection based on Torgerson should be reversed.

So amongst the broad and generic disclosure provided in Torgerson, one must first select a combination of water-soluble units and LCST units, then they must select a N-vinylcaprolactam as an LCST unit, then they must select an amount of LCST units to be within 5 to 70%, then they must choose one arrangement from (a) a block polymer



comprising water-soluble blocks alternating with LCST blocks; OR (b) a graft polymer whose backbone is formed from water-soluble units and bears LCST grafts.

Putting together the various possible options provided in Torgerson would result in thousands of possible combinations and even when using the present claims as a guide, which clearly the Office has done here, none of these combinations are the claimed block copolymer with alternating units of water-soluble and LCST blocks. Moreover, there is nothing in Torgerson which would lead one to a graft polymer whose backbone is formed from water-soluble units and bears LCST grafts, which is also an option in the claims.

As a further point of difference, Torgerson does not provide any disclosure to specifically select LCST units having the specific heat-induced demixing temperature as required in the claims. (see Claim 34: *“the heat-induced demixing temperature in aqueous solution of said units with an LCST being from 5 to 40°C for a concentration by mass in water of from 1% to 25% of said units”*).

As still further fundamental differences between the polymers defined in the claims and those of Torgerson is that Torgerson's polymers must exhibit two distinct immiscible phases (see col. 4, line 64) at any temperature. These distinct phases are formed by the hydrophilic side chains for one and the backbone for the other (see col. 4, line 64 to col. 5, line 2). The requirement of these two phases in Torgerson is so that each has a distinct glass transition temperature providing the requisite mechanical properties mandated by Torgerson. In contrast, the claimed polymers with the LCST units are water-soluble below the demixing temperature making the backbone and graft miscible –meaning that two distinct phases are not formed (as required by Torgerson). Yet another reason why following the teachings of Torgerson one would not have selected certain monomers and arranged them as required in the claims because doing so would, again, render Torgerson inoperable for the intended purposes stated.

Torgerson must disclose a more specific, limited teaching to those polymers as claimed. Torgerson fails to do so and as such does not provide an anticipating disclosure to present claims.

Dependent Claims 35, 37-50, 57-59 and 61 all contain further limitations that establish their patentability apart from those in independent Claim 34

Because the reference does not meet the very stringent requirements necessary for a reference to qualify as anticipatory under 35 U.S.C. § 102, the Examiner's rejection should be REVERSED.

**CONCLUSION**

Accordingly, in view of the above remarks and reasons explaining the patentable distinctness of the presently appealed claims over the prior art, Appellants request that the Examiner's rejections be REVERSED.

Respectfully submitted,

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**APPENDIX 1 (CLAIMS)**

Claims 1-33 (Cancelled).

34. (Rejected) A cosmetic composition comprising an aqueous phase, said aqueous phase comprising at least one compound with an optical effect and a polymer comprising water-soluble units and units having in water a lower critical solution temperature LCST, the heat-induced demixing temperature in aqueous solution of said units with an LCST being from 5 to 40°C for a concentration by mass in water of from 1% to 25% of said units, wherein the polymer is a block polymer comprising blocks consisting of water-soluble units alternating with units with an LCST; or the polymer is a graft polymer whose backbone is formed from water-soluble units and bears LCST grafts.

35. (Rejected) The cosmetic composition according to Claim 34, wherein the polymer is partially crosslinked.

36. (Rejected) The cosmetic composition according to Claim 34, wherein the heat-induced demixing temperature in aqueous solution of the units with an LCST of the polymer is from 10 to 35°C for a concentration by mass in water of from 1% to 25% of said units.

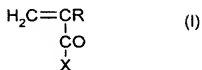
37. (Rejected) The cosmetic composition according to Claim 34, wherein the water-soluble units are obtainable by polymerization, or polycondensation, from natural polymers, modified natural polymers, or combinations thereof.

38. (Rejected) The cosmetic composition according to Claim 37, wherein the water soluble units are obtainable by polymerization.

39. (Rejected) The cosmetic composition according to Claim 38, wherein the water soluble units are obtainable by free-radical polymerization.

40. (Rejected) The cosmetic composition according to Claim 38, wherein the water soluble units are obtainable by polymerization of at least one monomer selected from the group consisting of:

- (a) (meth)acrylic acid;
- (b) vinyl monomers of formula (I):



wherein

R is H, -CH<sub>3</sub>, -C<sub>2</sub>H<sub>5</sub> or -C<sub>3</sub>H<sub>7</sub>; and

X is

(i) alkyl oxide of -OR', wherein R' is a linear or branched, saturated or unsaturated hydrocarbon-based radical containing from 1 to 6 carbon atoms, optionally substituted with at least one halogen atom; a sulphonic group (-SO<sub>3</sub><sup>-</sup>), a sulphate group (-SO<sub>4</sub><sup>-</sup>), a phosphate group (-PO<sub>4</sub>H<sub>2</sub>); a hydroxyl group (-OH); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>), a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>) or a group quaternary amine (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>) group, wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon-based radical comprising 1 to 6 carbon atoms, with the proviso that the sum of the carbon atoms of R' + R<sub>1</sub> + R<sub>2</sub> + R<sub>3</sub> does not exceed 7; or

(ii) -NH<sub>2</sub>, -NHR<sub>4</sub> and -NR<sub>4</sub>R<sub>5</sub> groups wherein R<sub>4</sub> and R<sub>5</sub> are, independently of each other, linear or branched, saturated or unsaturated hydrocarbon-based radicals comprising 1 to 6 carbon atoms, with the proviso that the total number of carbon atoms of R<sub>4</sub> + R<sub>5</sub> does not exceed 7, and wherein R<sub>4</sub> and R<sub>5</sub> can be optionally be substituted with one or more of a halogen atom; a hydroxyl group (-OH); a sulphonic group (-SO<sub>3</sub><sup>-</sup>); a sulphate group (-SO<sub>4</sub><sup>-</sup>); a phosphate group (-PO<sub>4</sub>H<sub>2</sub>); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>), a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>) and quaternary amine (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>) group,

wherein  $R_1$ ,  $R_2$  and  $R_3$  are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon-based radical comprising 1 to 6 carbon atoms, with the proviso that the sum of the carbon atoms of  $R_4 + R_5 + R_1 + R_2 + R_3$  does not exceed 7;

- (c) maleic anhydride;
- (d) itaconic acid;
- (e) vinyl alcohol of formula  $CH_2=CHOH$ ;
- (f) vinyl acetate of formula  $CH_2=CH-OCOCH_3$ ;
- (g) N-vinylactams such as N-vinylpyrrolidone, N-vinylcaprolactam and N-butyrolactam;
- (h) vinyl ethers of formula  $CH_2=CHOR_6$  in which  $R_6$  is a linear or branched, saturated or unsaturated hydrocarbon-based radical containing from 1 to 6 carbon atoms;
- (i) water-soluble styrene derivatives;
- (j) dimethyldiallylammonium chloride; and
- (k) vinylacetamide.

41. (Rejected) The cosmetic composition according to Claim 37, wherein the water-soluble units of the polymer are totally or partially polycondensates, natural polymers or modified natural polymers comprising a component selected from the group consisting of:

- (a) water-soluble polyurethanes;
- (b) xanthan gum;
- (c) alginates and derivatives thereof;
- (d) cellulose derivatives;
- (e) galactomannans and derivatives thereof; and
- (f) polyethyleneimine.

42. (Rejected) The cosmetic composition according to Claim 34, wherein the water-soluble units of the polymer have a molar mass ranging from 1000 g/mol to 5 000 000 g/mol

when they constitute the water-soluble backbone of a graft polymer, or a molar mass ranging from 500 g/mol to 100 000 g/mol when they constitute a block of a block polymer.

43. (Rejected) The cosmetic composition according to Claim 34, wherein the units with an LCST of the polymer are selected from the group consisting of:

- (a) polyethers;
- (b) polyvinyl methyl ethers;
- (c) polymeric N-substituted acrylamide derivatives containing units with an LCST;
- (d) copolymeric N-substituted acrylamide derivatives containing units with an LCST; and
- (e) polyvinylcaprolactam and vinylcaprolactam copolymers.

44. (Rejected) The cosmetic composition according to Claim 34, wherein the units with an LCST comprise polypropylene oxide (PPO)<sub>n</sub> wherein n is an integer from 10 to 50, or random copolymers of ethylene oxide (EO) and propylene oxide (PO), represented by the formula:



wherein m is an integer ranging from 1 to 40, and n is an integer ranging from 10 to 60.

45. (Rejected) The cosmetic composition according to Claim 44, wherein the molar mass of the units with an LCST of the polymer is from 500 to 5300 g/mol.

46. (Rejected) The cosmetic composition according to Claim 45, wherein the units with an LCST of the polymer comprise a polymeric or copolymeric N-substituted acrylamide derivative containing units with an LCST.

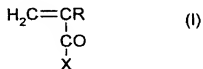
47. (Rejected) The cosmetic composition according to Claim 46, wherein the units with an LCST of the polymer comprise at least one member selected from the group consisting of:

(a) poly-N-isopropylacrylamide,

(b) poly-N-ethylacrylamide, and

(c) a copolymer of N-isopropylacrylamide or N-ethylacrylamide with a vinyl monomer selected from the group consisting of:

(i) vinyl monomers of formula (I):



wherein

R is H, -CH<sub>3</sub>, -C<sub>2</sub>H<sub>5</sub> or -C<sub>3</sub>H<sub>7</sub>; and

X is

alkyl oxide of -OR', wherein R' is a linear or branched, saturated or unsaturated hydrocarbon-based radical containing from 1 to 6 carbon atoms, optionally substituted with at least one halogen atom; a sulphonic group (-SO<sub>3</sub><sup>-</sup>), a sulphate group (-SO<sub>4</sub><sup>-</sup>), a phosphate group (-PO<sub>4</sub>H<sub>2</sub>); a hydroxyl group (-OH); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>), a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>) or a group quaternary amine (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>) group, wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon-based radical comprising 1 to 6 carbon atoms, with the proviso that the sum of the carbon atoms of R' + R<sub>1</sub> + R<sub>2</sub> + R<sub>3</sub> does not exceed 7; or



-NH<sub>2</sub>, -NHR<sub>4</sub> and -NR<sub>4</sub>R<sub>5</sub> groups wherein R<sub>4</sub> and R<sub>5</sub> are, independently of each other, linear or branched, saturated or unsaturated hydrocarbon-based radicals comprising 1 to 6 carbon atoms, with the proviso that the total number of carbon atoms of R<sub>4</sub> + R<sub>5</sub> does not exceed 7, and wherein R<sub>4</sub> and R<sub>5</sub> can be optionally be substituted with one or more of a halogen atom; a hydroxyl group (-OH); a sulphonic group (-SO<sub>3</sub><sup>-</sup>); a sulphate group (-SO<sub>4</sub><sup>-</sup>); a phosphate group (-PO<sub>4</sub>H<sub>2</sub>); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>), a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>) and quaternary amine (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>) group, wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon-based radical comprising 1 to 6 carbon atoms, with the proviso that the sum of the carbon atoms of R<sub>4</sub> + R<sub>5</sub> + R<sub>1</sub> + R<sub>2</sub> + R<sub>3</sub> does not exceed 7;

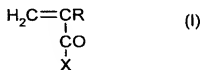
- (ii) maleic anhydride,
- (iii) itaconic acid,
- (iv) vinylpyrrolidone,
- (v) styrene and its derivatives,
- (vi) dimethyldiallylammonium chloride,
- (vii) vinylacetamide,
- (viii) vinyl alcohol,
- (ix) vinyl acetate,
- (xi) vinyl ethers, and
- (xii) vinyl acetate derivatives.

48. (Rejected) The cosmetic composition according to Claim 46, wherein the molar mass of the units with an LCST of the polymer is from 1000 g/mol to 500 000 g/mol.

49. (Rejected) The cosmetic composition according to Claim 34, wherein the units with an LCST of the polymer comprise polyvinylcaprolactam or a copolymer of vinylcaprolactam and a vinyl monomer selected from the group consisting of

with a vinyl monomer selected from the group consisting of:

(i) vinyl monomers of formula (I):



wherein

R is H, -CH<sub>3</sub>, -C<sub>2</sub>H<sub>5</sub> or -C<sub>3</sub>H<sub>7</sub>; and

X is

alkyl oxide of -OR', wherein R' is a linear or branched, saturated or unsaturated hydrocarbon-based radical containing from 1 to 6 carbon atoms, optionally substituted with at least one halogen atom; a sulphonic group (-SO<sub>3</sub><sup>-</sup>), a sulphate group (-SO<sub>4</sub><sup>-</sup>), a phosphate group (-PO<sub>4</sub>H<sub>2</sub>); a hydroxyl group (-OH); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>), a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>) or a group quaternary amine (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>) group, wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon-based radical comprising 1 to 6 carbon atoms, with the proviso that the sum of the carbon atoms of R' + R<sub>1</sub> + R<sub>2</sub> + R<sub>3</sub> does not exceed 7; or

-NH<sub>2</sub>, -NHR<sub>4</sub> and -NR<sub>4</sub>R<sub>5</sub> groups wherein R<sub>4</sub> and R<sub>5</sub> are, independently of each other, linear or branched, saturated or unsaturated hydrocarbon-based radicals comprising 1 to 6 carbon atoms, with the proviso that the total number of carbon atoms of R<sub>4</sub> + R<sub>5</sub> does not exceed 7, and wherein R<sub>4</sub> and R<sub>5</sub> can be optionally be

substituted with one or more of a halogen atom; a hydroxyl group (-OH); a sulphonic group (-SO<sub>3</sub><sup>-</sup>); a sulphate group (-SO<sub>4</sub><sup>-</sup>); a phosphate group (-PO<sub>4</sub>H<sub>2</sub>); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>), a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>) and quaternary amine (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>) group, wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon-based radical comprising 1 to 6 carbon atoms, with the proviso that the sum of the carbon atoms of R<sub>4</sub> + R<sub>5</sub> + R<sub>1</sub> + R<sub>2</sub> + R<sub>3</sub> does not exceed 7;

- (ii) maleic anhydride,
- (iii) itaconic acid,
- (iv) vinylpyrrolidone,
- (v) styrene and its derivatives,
- (vi) dimethyldiallylammonium chloride,
- (vii) vinylacetamide,
- (viii) vinyl alcohol,
- (ix) vinyl acetate,
- (xi) vinyl ethers, and
- (xii) vinyl acetate derivatives.

50. (Rejected) The cosmetic composition according to Claim 49, wherein the molar mass of the units with an LCST is from 1000 to 500 000 g/mol.

51. (Rejected) The cosmetic composition according to Claim 34, wherein the proportion by mass of the units with an LCST of the polymer is from 5 to 70% relative to the polymer.

52. (Rejected) The cosmetic composition according to Claim 34, wherein the proportion by mass of the units with an LCST of the polymer is from 20 to 65% relative to the polymer.

53. (Rejected) The cosmetic composition according to Claim 34, wherein the proportion by mass of the units with an LCST of the polymer is from 30 to 60% relative to the polymer.

54. (Rejected) The cosmetic composition according to Claim 34, wherein the concentration by mass of polymer in the aqueous phase is from 0.1 to 20%.

55. (Rejected) The cosmetic composition according to Claim 34, wherein the concentration by mass of polymer in the aqueous phase is from 0.5 to 10%.

56. (Rejected) The cosmetic composition according to Claim 34, wherein the compound with an optical effect is selected from the group consisting of a filler, a pigment, a nacre, a tensioning agent, a matt-effect polymer, and a mixture thereof.

57. (Rejected) The cosmetic composition according to Claim 34, which is a dispersion.

58. (Rejected) The cosmetic composition according to Claim 34, further comprising an oily phase, wherein the oily phase is dispersed in the aqueous phase and is an oil-in-water emulsion.

59. (Rejected) The cosmetic composition according to Claim 58, wherein the aqueous phase further comprises an emulsifying surfactant.

60. (Rejected) The cosmetic composition according to Claim 34, wherein the aqueous phase further comprises a gelling agent in a concentration of from 0.01 to 5% by weight relative to the total weight of the composition.

61. (Rejected) The cosmetic composition according to Claim 34, wherein the aqueous phase constitutes a physiologically acceptable medium.

62. (Rejected) A method of reducing the tack of a film or deposit obtained from a composition with an optical effect, comprising combining at least one compound with an optical effect and a polymer comprising water-soluble units and units having in water a lower critical solution temperature LCST, the heat-induced demixing temperature in aqueous solution of said units with an LCST being from 5 to 40°C for a concentration by mass in water of from 1% to 25% of said units, wherein the polymer is a block polymer comprising blocks consisting of water-soluble units alternating with units with an LCST; or the polymer is a graft polymer whose backbone is formed from water-soluble units and bears LCST grafts, the polymer optionally being partially crosslinked.

63. (Rejected) A method of maintaining the staying power of a film or deposit obtained from a composition with an optical effect, comprising combining at least one compound with an optical effect and a polymer comprising water-soluble units and units having in water a lower critical solution temperature LCST, the heat-induced demixing temperature in aqueous solution of said units with an LCST being from 5 to 40°C for a concentration by mass in water of from 1% to 25% of said units, wherein the polymer is a block polymer comprising blocks consisting of water-soluble units alternating with units with an LCST; or the polymer is a graft polymer whose backbone is formed from water-soluble units and bears LCST grafts, the polymer optionally being partially crosslinked..

64. (Rejected) The method according to Claim 63, wherein the staying power of said film or deposit is maintained when exposed to a hot and/or humid atmosphere.

65. (Rejected) The method according to Claim 64, wherein the relative humidity of the atmosphere is from 40 to 95%.

66. (Rejected) The method according to Claim 64, wherein the temperature of the atmosphere is from 25 to 45°C.

67. (Rejected) A method of fading out imperfections in the skin and/or concealing microreliefs, wrinkles, fine lines and/or pores of the skin, comprising applying the composition according to Claim 34 to the skin.

68. (Rejected) A method of making up the skin, the eyelashes, the lips and/or the hair, comprising applying the cosmetic composition according to Claim 34 to the skin, the eyelashes, the lips and/or hair.

69. (Rejected) A process for providing a matt appearance and/or to conceal defects in skin, comprising applying the cosmetic composition according to Claim 34 to the skin.

**APPENDIX II (EVIDENCE)**

None

APPENDIX III

RELATED APPEALS AND INTERFERENCES

None.